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ABSTRACT

This comparison is based on the authors' selective review of literature, observations of Montessori preschools in America and Australia, and experience in early childhood teacher education in Australia. The discussion explores general educational objectives, curricula, children's activities, instructional approaches, and teacher role in preschools implementing Montessorian and eclectic (or "regular") approaches. The preparation of early childhood teachers for Montessori and regular preschools is also compared and discussed in relation to advances in knowledge of child development and modern educational theory and practice. Recent research comparing educational outcomes of Montessori and regular preschool education is cited. The discussion concludes with an evaluation of the relevance and usefulness of the Montessori approach within the fields of preschool education and teacher education today. (RH)

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MONTESSORI AND REGULAR PRESCHOOLS: A COMPARISON

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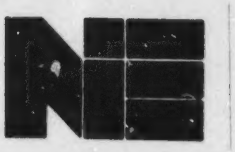

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Parents, teachers, and other educators are interested in the Montessori debate. Are experiences provided at Montessori preschools better than those provided by regular preschools? Is the method of education advocated by Montessori in the early part of this century a better way to teach today's young children than the approaches advocated by more recent theorists and educators? This discussion seeks to compare the Montessori approach and the regular nursery school approach to preschool education. The comparison involves an investigation into general educational objectives, the curriculum, children's activities, instructional approaches, and the teacher's role. Material for this comparison has been drawn from the literature (Koche, 1973; Montessori, 1914, 1964; Orem, 1974; Simons, 1980; Ward, 1913), from the authors' observations of Montessori preschools in America and Australia, and from experience in early childhood teacher education in Australia. While there is some research on the performance of children in Montessori and regular preschools, there has been little documentation (other than from exponents of Montessori education) about the way Montessori education is implemented or about how this approach differs from regular preschool education.

The preparation of early childhood teachers for Montessori and for regular preschool will also be compared and discussed in relation to advances in knowledge of child development and modern educational theory and practice. Recent reserach is reviewed for comparisions of educational outcomes of Montessori and regular preschool education. The discussion will conclude with an evaluation of the relevance and usefulness of the Montessori approach within the field of preschool education and teacher education today.

THE SCHOOL CURRICULUM

The curriculum in preschool education is taken to mean the total of all activities and experiences that impinge upon children in relation to their enrollment in a preschool service. Therefore, discussed in this section will be general activities (structured and unstructured in classroom and playground), as well as activities related to subject disciplines (language, math, and music). The variety of instructional approaches and settings employed by teachers, the degree of parental involvement, grouping for instruction, approaches to discipline, and other teacher behaviors are each considered as components of the curriculum. Examination of the curriculum begins with a summary of the broad educational objectives of Montessori and regular preschools.

Objectives

Both Montessori and regular preschools seek to maximize young children's learning potential by laying the foundations for subsequent learning and social adjustment. However, they differ in the emphasis they give to the importance of various aspects of social, emotional, cognitive, physical and moral/ethical/religious development.

Comparison of Objectives. The objectives of the regular or "traditional" preschool have been summarized by Pitcher (1966). She writes:

> We want to have children get to know everyday phenomena in many firsthand, sensory ways, to question thoughtfully and think for themselves. They need to enjoy the satisfactions of

problem solving and learning skills, lest they stop seeking. They also need to express their feelings and sense of self through dramatic play, dance, graphic art, literature. We want to help children to begin to symbolize ideas with pictures and signs as well as with spoken words. We want to cultivate in them a delight in language used playfully and imaginatively, in ways other than just labeling or demanding. We want them to have fun as they play, since play is a young child's natural way of working. (p. 4-1)

Such a summary of educational objectives may be contrasted with this recent statement issued by the American Montessori Institute --an affiliate of the Association Montessori Internationale (AMI)--in which a narrower range of objectives is presented:

Dr. Montessori recognized that the only valid impulse to learning is the self motivation of the child. The director/directress prepares the environment, programmes the activity, functions as the reference person and exemplar, offers the child stimulations; but it is the child who learns, who is motivated through the work itself to persist in his or her chosen task. If the Montessori child is free to learn, it is because he has acquired from his exposure to both physical and mental order, an "inner discipline." This is the core of Dr. Montessori's educational philosophy. (Montessori Institute of Los Angeles, Inc., n.d.)

Montessori developed her educational theories by working first in the area of special education.[1] She demonstrated that, by good teaching, so-called idiot children could learn to read and write (Edmonson, 1966). Specifically, Montessori used three educational strategies to promote her pupils' learning achievement. The first was the use of structured material. Developing with great insight and intelligence the work of Itard and Sequin, she devised a didactic apparatus that was intrinsically motivating to young children, graded, and in many cases, self-correcting. She recognized that a great deal of sensory experience with concrete materials was a necessary prerequisite to later academic learning. This method of assisting the child's learning has been fully accepted and incorporated in regular preschool practice.

The second strategy was the creation of a literate and numerate classroom environment. The mathematical and language-based activities available to the children encouraged them to take the initiative in exploring literacy and numeracy. This approach is used by preschool teachers today.

Her third strategy was to individualize instruction. Montessori was a brilliant analytical teacher and an acute observer of young children. She was one of the forebearers of the study of child development; today, preschool teachers reflect her influence when they use an individualized approach to young children's learning and employ individual development records as a basis for planning.

Montessori formulated many forward-looking educational objectives, one of the most important being the "liberty of the child" in the learning environment. In this, she was a great innovator, as Italian

schools and indeed all schools at the turn of the century were formal, authoritarian, and prescriptive. On a visit to America in 1913, she lectured to vast audiences on the subject of children as eager learners who would take the initiative to learn if given an appropriate learning environment (Kornegay, 1981). Within the limits of materials available in the classroom, Montessori offered the child the opportunity to select learning tasks. This practice, a great innovation in its time, has been accepted in regular preschool practice today. Montessori believed that education should develop in children the personal characteristics of self-discipline, persistence, respect for the rights of others, self-confidence, and morality. It is probably true to say that most of these outcomes would also be sought by regular preschool teachers, and it is not in these general objectives that Montessori and regular preschool educators differ. However, some educational objectives considered important today were not stressed by Montessori. While Montessori did not ignore physical development, social development, and creativity, she did give them a lower priority.

Physical development. By allowing children to move about freely within the classroom, Montessori offered more opportunity for physical activity than did the schools of her day. She advocated a daily period of gymnastics and used lines painted on the floor of the classroom for children to practice balanced walking, as on a tightrope, without the danger of falling. She recommended that a "gate" frame that children could hang from to strengthen their arms be positioned unobtrusively in the garden (Montessori, 1914). It may be conjectured that she would approve of the playground and indoor apparatus provided today in most regular preschools to stimulate gross motor activity and to help develop

gross motor skills. However, Montessori preschools today, as observed by one of the present authors in both Australia and the United States, tend to have little apparatus for the development of motor skills.

Social development. Social development could occur more easily in a Montessori school than in an Italian school of the 1900s simply because in the former children were free to move about and interact in the course of the school day. Nowadays, regular preschools make explicit provision for social development by drawing children's attention to the need for care and consideration in social relationships with children and adults. In the Montessori preschool today, the teacher is expected to exhibit polite and considerate behavior in her relationships with children and adults. It is expected that children will copy such behavior. To the observer, the teacher's actions may often seem stilted.

Creativity. Creativity (as expressed through fantasy and fairy tales, dramatic play, creative dance and drama) had, and continues to have, little place in Montessori schools. A contemporary Montessori educator comments, "Montessori realized that a reality-bound school situation may prove more beneficial to the child in order to release his creative forces at a time when he is incapable of distinguishing fact from fantasy" (Rambusch, 1962, p. 93). This "realization" of Montessori's has not been validated by modern psychologists and educators, and the regular preschool curriculum includes many opportunities for the child to engage in dramatic play (in which the child takes a variety of social roles) and free play (in which the child uses certain objects symbolically or uses imaginary props for the play situation). Smilansky (1968) was the first of many to validate empirically the claim that dramatic fantasy play can enhance children's

cognitive development. Elkind (1983), after discussing the value of play in children's cognitive and emotional development, has argued that it is time for Montessori educators to reevaluate their attitude toward such play in the education of young children. While Montessori failed to observe the learning potential in dramatic and symbolic play, she did understand that the aspect of fantasy represented in many of the rather macabre traditional fairy tales was inappropriate for very young children. Many modern educators would agree with her.

After reading the George (1912) translation of The Montessori Method, Simpson (1912), an Australian kindergarten teacher, made an interesting comparison between Montessori and regular preschool education in the early 1900s: "Dr. Montessori does not recognise the value of literature (myth, fairy tale, nursery rhyme, etc.) in the education of little children. The whole appeal of her educational method appears to be to the senses and intellect--imagination, sentiment and emotion are left out" (p. 7). This comment also characterizes the Montessori classroom today.

In short, the regular preschool has assimilated and incorporated many of the revolutionary educational goals of Montessori in such areas as freedom of choice of activity and physical expression. The regular preschool also refers to modern developmental psychology for insight into the way children think and learn. The regular preschool educator has added further educational goals in the areas of social, emotional, and physical development. These goals are implemented through play, the encouragement of creativity, and the use of language.

To the extent, then, that present-day Montessori schools adhere to the original Montessori educational objectives, they may be inadequate

learning environments for today's young children. This assertion will be elaborated in the following discussion.

Activities

Montessori centered the children's activities around learning domestic competencies, engaging in sensory discrimination, and mastering fine motor skills. These activities are the vehicle for a large part of the present-day Montessori curriculum. In a regular preschool, the range of activities is wider, including gross motor skills and indoor and outdoor play. The teacher encourages and stimulates these activities, frequently joining in the play.

Berk (1976) studied the activities undertaken by children in laboratory/demonstration schools and Montessori schools. Although the activities in Montessori schools were selected by children rather than their teachers, these activities realized teachers' goals, according to Berk. She found that children engaged in observably different activities according to the school program, attributing this phenomenon to the "well-defined philosophies and clear curricular rationales" (p. 80) of these two types of school program.

Of course, all teachers make activities available to their preschool classes. The Montessori activities are to be undertaken according to rules of procedure demonstrated by the teacher. Activities in the regular classroom may, in general, be undertaken by the child in any way he or she wishes.

Domestic competencies. In a Montessori school, activities to encourage domestic competencies are called "practical life" activities. These activities are offered to the child in order to increase his or her competence in the business of daily life. Practical life activities include

sweeping, mopping, dusting, cleaning mirrors, polishing furniture or metal objects, pouring, spooning, measuring, buttoning, lacing, tying bows, and caring for plants and animals. Howels (1977) describes such activities in a Montessori school in Rome. As in Montessori's day, the children she observed were engaged in a variety of bona fide practical tasks. In the original Montessori schools, children performed all the necessary housekeeping tasks--sweeping, dusting, tidying, setting tables for meals, waiting at tables, clearing away afterwards, and so forth. However, many modern Montessori preschools have attenuated these functions: The child is offered a toy broom with which to "sweep" the floor, while the teacher does the real sweeping up at the end of a session after the children have departed (Simons, 1980). This procedure directly contradicts Montessori's intention that the child, at an early age, become truly independent and competent in housekeeping and in personal management skills and suggests a conceptual confusion about the nature and role of these activities.

Many Montessori teachers nowadays feel free to devise additional practical life activities. Accordingly, children may be seen engaged in such activities as transferring liquid from one container to another by means of a small sponge or an eyedropper or transferring objects (dried beans or marbles) from one container to another by means of tweezers or sugar tongs. Such activities as these clearly do not occur in daily life, and any intrinsic value in such activities would be by way of fine motor skill development. However, ample opportunity for fine motor development is found in both regular preschool and Montessori classrooms, and it is suggestive of a conceptual woolliness that such activities are presented in Montessori preschools under the guise of practical life activities.

In regular preschools, a variety of "practical life" activities are usually undertaken by children as and when the actual need arises--sweeping the classroom floor at the end of a session, sweeping the surrounds of the sandpit, mopping up a spilled bucket of water or a paint-splashed floor, dusting the playhouse, picking up and laying out mats. Buttoning and bow tying are encouraged in the context of putting on and taking off clothes. In many centers, cooking and food preparation are regular events.

Sensory experiences. In a Montessori school, sensory experiences are gained by working with designated "sensorial" materials. Examples of Montessori sensorial materials are baric tablets, broad stair (a set of rectangular prisms graduated by size and mass), pink tower (a set of cubes graduated by size and mass to be assembled vertically), rough and smooth tablets, smelling bottles, and sound boxes. In a regular preschool, these materials would be categorized as discrimination aids--visual, auditory, tactile, olfactory. Some of these materials, as developed by Montessori, would be found in regular preschool classrooms today. In addition, variations, elaborations, and extensions of exercises in discrimination, often teacher-made (Farrow & Hill, 1975), would be found in regular preschools and in some present Montessori preschools, but in the more traditional Montessori preschools, no additional sensorial materials would be provided. Gitter (1970) gives precise directions for introducing sensorial materials to children.

The regular preschool teacher feels it necessary to offer discrimination materials that respond to pupils' interests and levels of understanding and that present the concepts in novel and attractive ways to lead the child to interact with the materials. In addition, the regular

preschool teacher looks for opportunities to develop sensory awareness through the use of day-to-day occurrences involving environmental sounds, sights, and textures.[2] Montessori planned her materials to be attractive to children, and thus intrinsically motivating, but the pupils at the first Montessori schools (in the slums of Milan in the early 1900s) and the children of today (when even the majority of households below the poverty line have television sets) are not comparable populations. One of the present authors has observed that in most Montessori schools, the sensory materials available seem somewhat neglected by children, presumably because they are not now intrinsically interesting or are of limited interest.

Fine motor skills. As mentioned earlier, both Montessori and regular preschool classrooms are rich in a supply of activities to promote the development of fine motor skills in children. One obvious observable difference is that the regular preschool tends to be stocked with a wider variety of materials--puzzles, games, toys and constructional kits, either bought or teacher-made.

Gross motor skills. The development of gross motor skills is relatively neglected in many of today's Montessori schools. On the basis of the present authors' observations, the teacher's daily program rarely makes provision for the acquisition of such skills. By contrast, teachers in regular preschools program for gross motor developmental activities and tend to keep developmental records that include the dimension of gross motor skills.

Play. The opportunity for and encouragement of dramatic and symbolic play forms an important part of the activity of a regular preschool. However, as discussed earlier, Montessori saw little value in

free, creative play. Consequently, these types of play are not generally permitted in a Montessori school. The regular preschool teacher provides suitable properties--clothing, hats, fabric, sand, boxes, water, tools, toys, models of real-life objects or the objects themselves (e.g., telephones or toy farmyard animals), blocks, and waste materials--with which children are encouraged to play. There is no set way for using these materials, and children are free to combine them as they desire or as their play requires. Children may thus build a house with empty cartons or blocks, dress up as a family, live in the house, and bring into it those objects they need to further their play. They may transform their house into a fire station or supermarket, and the teacher will help and encourage them, especially by stimulating language and thinking as problems arise.

Subject Disciplines

The curricula of regular and Montessori preschools are commonly planned to include activities within the following subject disciplines: language and literature, music, science, social studies, and mathematics. Montessori and regular preschool curricula differ in the amount of time allocated to these disciplines and in the way in which they are taught.

Language and literature. Montessori largely ruled out the use of language as the medium of instruction: "With normal children, the Montessori teacher limits her verbal contacts to a considerable extent. Deprived children will need more structured language lessons" (Pinho, 1967, p. 143). Montessori emphasized the role of didactic equipment over the role of language. The teacher was exhorted to silence whenever possible and instructed to use the fewest words that would serve

on any particular occasion. Montessori was doubtless reacting to the classroom situation of her day, in which the teacher talked and the children did not. By requiring her teachers to talk little, she allowed the children to take the initiative. To this extent, she did in fact introduce child language into the classroom. However, the child's language development was not specifically encouraged and facilitated as it is in the modern regular preschool. Teachers in the modern Montessori classroom are still enjoined to use as few words as possible. As Edmonson (1966) observed of the Montessori teacher, "Her task is not to talk but to arrange a series of 'motives' in a special environment" (p. 72).

With respect to literacy education, Montessori was extremely innovative, creating materials that could assist children to teach themselves to read and write. Children also become facilitators for one another in the Montessori classroom, where there is a mixed-age group (typically between 2½ or 3 to 6 years). Some Montessori literacy materials are used in the regular preschool, but these form only a small part of the total set of literacy materials and facilities available to the modern preschool child. Literacy materials available in the modern setting include an abundance of inexpensive and attractive picture and storybooks and a variety of audiovisual aids, including films, videotapes, slides, and audiotapes to accompany written materials. The Montessori literacy materials look unstimulating and limited by comparison. Elkind (1983) points out that Montessori's approach to reading instruction is based on identity decoding, appropriate for learning to read Italian, rather than on the equivalence decoding appropriate for learning to read English.

Once children have made a start on learning to read, Montessori schools introduce grammar, sentence structure, and formal composition along the lines laid down by Montessori. This part of the curriculum appears most inappropriate for schools of today, where language and literacy teaching reflect the principles of functional linguistics.

The regular preschool teacher accepts the view that mastery of one's language promotes cognitive growth and academic achievement. Thus, the teacher has a responsibility for initiating activities that directly contribute to children's language development. Examples of the way the regular teacher promotes such an environment include establishing the classroom as a literate environment, presentating children's literature, encouraging children to verbalize and record their activities, introducing new vocabulary (especially through social studies and mathematics), encouraging children to speak freely in the classroom and on the playground, and promoting the daily use and enjoyment of books. Such a concentration of situational language is absent from a typical Montessori classroom. The present authors have observed that, in most, the use of books is not fostered and the library collection tends to be small. Children are usually not read to daily. As Evans (1975) has concluded, "Montessori's position on language development is not sufficiently comprehensive to satisfy modern criteria for a theory of language" (p. 284).

Music. Beginning with sensory exercises with sound boxes, Montessori pupils progress to using a set of bells also designed by Montessori. Bells are paired, as a sensory exercise, and then the tones and semitones are learned, named, and represented on staves with movable notes. These exercises, combined with the unaccompanied

singing of children's songs, seem to form the Montessori music syllabus for young children. The material is useful as far as it goes, but the regular preschool music curriculum offers a great deal more, such as the use of tuned and untuned percussion instruments and integration of music and movement to develop an understanding of rhythm, pitch, duration, and timbre. On the basis of the authors' observations, it can also be noted that the regular preschool program usually has a daily group lesson in music but the Montessori preschool usually does not. As Faulman (1980) has pointed out, Montessori's inventiveness in her approach to music education for young children is undisputed; however, her didactic methods, which focus only on pitch matching, have been overtaken first by the instructional techniques of Dalcroze and later by those of Orff and Kodaly.

Science and social studies. Montessori developed simple didactic activities for children's use in science and social studies. Her topics seem developmentally inappropriate today, and the presentation methods as observed in use by strict Montessori teachers seem mechanical. The Montessori reliance on maps and mapping for the teaching of geography, for example, takes no account of the child's developmental understanding of the concept of "map." The regular preschool teacher, on the other hand, may use a variety of methods, including pictures, excursions, and block-play activities to introduce this concept. In The Montessori Manual of Cultural Subjects: A Guide for Teachers, Koche (1973) provides an overview of subjects such as botany, history, and geography. The approach is a narrow one and enshrines many old-fashioned concepts of systematics in science. These subjects can now be studied in situ as well as in the classroom.

Mathematics. Montessori was brilliantly inventive in the area of mathematical apparatus. A perusal of the catalogue of the major commercial supplier of Montessori equipment (Niehuis Montessori) reveals a long list of items that are conceptually sound embodiments of mathematical principles in arithmetic, geometry, and algebra. However, it seems that Montessori had an almost mystical belief in the ability of a piece of structured apparatus to transfer the mathematical concepts it embodied to the mind of the child who worked with it. Reflecting on her training as a Montessori teacher, Rambusch (1978) wrote, "The materials were not discussed in terms of the concepts they encapsulated. They were offered as quasi-magical mechanisms, through which children would prehend sensorially what others struggled to comprehend cognitively" (p. 10).

The study of child development leads the modern preschool educator to believe that the origins of mathematical understanding lie in experience with concrete materials together with the use of language to describe, label, compare, and contrast. Thus, the child gradually comes to understand physical and mathematical concepts. The language aspect of mathematical development was not stressed by Montessori, nor is it stressed in the curriculum of today's Montessori schools. A certain amount of labelling in Montessori programs takes place (big/little, thick/thin, tall/short), but little occurs in the way of the real-life number use considered important in the regular preschool (for example, using cardinals and ordinals in sentences: Who's third in this line? How many children do I need to carry these four baskets?).

Instructional Approaches

It is clear to the observer that a Montessori classroom looks, sounds, and feels quite different from a regular preschool classroom. This section examines some of the dimensions where a difference is perceptible.

The classroom environment. Modern Montessorians state that an important feature of their approach is that children work within a "prepared environment." There seems to be some suggestion that children in other approaches do not. "A classroom should not look like a supermarket," a Montessori teacher educator informed one of the present authors. It is true that no Montessori classroom looks like a supermarket, but there are some features of a supermarket that, even before supermarkets were invented, Montessori educators were using to achieve educational ends: a variety of choice, orderly presentation of like materials, attractiveness in display, and enticement.

Despite the implication that the regular preschool lacks an intentional structure, the regular preschool teacher uses the same principles to create a prepared environment. The difference arises because the Montessori teacher is limited in the number of new materials he or she may introduce, while the regular preschool teacher is not. As a result, the Montessori pupil enters a supermarket where the shelves are rather bare, physically and conceptually. The regular preschool pupil's supermarket is more fully stocked, offers a wider choice to the customer, and has a stock that changes in response to customer needs.

Wiley and Langford (1981) noted that in Melbourne, Australia, all of the five Montessori schools and four regular preschools they observed for a comparative study "contained the traditional [preschool] kinder-

garten activities of puzzles, painting, pasting, playdough" (p. 25). In this respect, the Montessori preschools created an environment similar to that of the regular preschools. Two important questions are raised here: Can Montessori schools that have environments significantly different from those Montessori specified really be called Montessori schools? and, How do these self-styled "Montessori schools" then differ from regular preschools?

Krogh (1982) argued that the Montessori type of prepared environment can be helpful to the handicapped child in an integrated classroom. She considered the ready availability of learning materials, their easy accessibility on the shelves, and the controlled level of stimulation achieved by restricting the number of items available at any one time features of a Montessori classroom that could assist the handicapped child to engage in self-directed learning and to avoid potentially rejecting group situations. She stated that "the mainstreamed child is less likely to feel rejected, a prime factor in the development of self-image" (p. 60). However, a "controlled level of stimulation" may be facilitative for an autistic child, or for one described as hyperactive, but may not be facilitative for a child with cerebral palsy or limited hearing. Thus, the nature of the handicap should be considered before this argument can be accepted. Furthermore, while the opportunity for individual work may indeed mean that the child is less likely to experience peer-group rejection, this fact does not mean that the child will necessarily feel more accepted by the peer group: There may be little meaningful peer group contact for acceptance to develop. Surely, acceptance is at least as important as nonrejection in the development of self-image.

Playground environment. Since the Children's Houses established by Montessori herself apparently made little use of the outdoors as a teaching environment, modern Montessorians seem likewise to neglect its possibilities. The playground is used in the same way as in elementary schools--as a place to send the children for a "break" from the classroom.

By contrast, the regular preschool uses the playground as a second learning environment, finding it particularly suitable for large muscle development, consolidation of gross motor skills, social cooperation, and social play. In areas where the climate does not permit outdoor activities for part of the year, or where no outdoor area is available, the regular preschool establishes an indoor gymnasium to encourage gross motor activity.

Grouping for instruction. Montessori individualized instruction for young children, a great innovation at the time. The individualized approach she demonstrated has been fully accepted as one appropriate method for teaching young children. Small group instruction and larger group instruction are also used in regular preschools as considered appropriate. Learning in groups seems to have advantages for social and language learning, as well as being an economical use of the teacher's time. Observation by one of the present authors in Montessori classrooms suggests that unless a teacher has the assistance of a well-trained aide or aides, he or she is unable to offer instruction to even half the children in the classroom in each session. So, although children receive individual instruction, they do not receive it daily. A review of research by McGrath (1980) found that Montessori children had a lower rate of child/adult interaction than did children in

a regular classroom. More research is needed to establish accurately the amount of small group, large group, and individual instruction that occurs in Montessori and regular preschools.

Parental involvement. The regular preschool has always maintained a close working relationship with its children's parents and other caretakers. There are various ways in which parents, teachers, and children come more closely together. The most basic relationship is renewed daily as parents bring children to the center and pick them up at the end of each session. Ideally, the preschool teacher can spend a few moments with each parent each day since the arrival and dismissal procedures do not take place within the confines of a timetable. Arrivals may take place over a half hour (or longer in a day care center), and children may be picked up in a leisurely fashion at the end of a session when the teacher would be free to talk. Regular preschools believe that the child is assisted in assimilating and accommodating the change from home to school when schools take the initiative in establishing links with the home through parent involvement. The parents of newly enrolled children are encouraged to stay with the child in the classroom until the child has settled in. In recent years, parents of children in regular preschools have been invited to assist the teacher in the classroom if they have the time and interest, and many parent assistants have been helped to understand their children better by seeing them in relation to other children and through the eyes of the teacher, a professional trained in child development. Regular preschools are thus likely to have many adults in their classroom and playgrounds, and children are encouraged to use these other adults as resources.

Montessori preschools, by contrast, generally allow parents and other adults into the classroom by appointment only, never more than two at a time, and for an observation period of 30 to 45 minutes only (Simons, 1980). The observer is placed on a low chair in an out-of-the-way corner and is prohibited from moving, from making eye contact with the children, or from interacting with the staff. In general, Montessori preschools limit parental involvement to fundraising and management activities.

The daily program and "the liberty of the child." In the contemporary Montessori classroom, the greater part of each session is available to the child for the pursuit of self-selected activities. In the regular preschool, the session is usually programmed to offer the child a substantial period of time for self-selected activities. The remainder of the session is devoted to group activities, which may include experiences with literature, music, language, math, science, social studies, or drama. These groups are usually not compulsory and are initiated in response to children's perceived interests.

The greater amount of teacher-directed time in a regular preschool program than in a Montessori preschool is taken as evidence, by Montessori educators, of the greater "liberty of the child" in the Montessori situation. However, evaluating the relative amount of "liberty" is difficult. The important issue is that the dimensions of liberty differ in the following ways: In a Montessori preschool, liberty resides in the notion that the child is free to select his or her own activity, whereas in the regular preschool, liberty resides in the notion that the child is free to use the activities in any way he or she chooses. For example, having chosen the pink tower, the child in the

Montessori classroom may use it in one way only. If a child in a regular preschool were to select the pink tower, he or she would be free to make a train with it, to find a set of toy people to ride in the train, or to use it in other symbolic ways.

As has been mentioned, the child in an original Montessori school had far greater liberty than his or her contemporaries in Italian schools of the day. A school day in a Montessori setting in Italy lasted from 9:00 a.m. to 4:00 or 5:00 p.m., and the program could include clay modelling, design, care of plants and animals, gymnastics, games (directed), religion, conversation (i.e., children giving an account of the events of the day before), music, singing, housekeeping, brick-making and building, and potting (Montessori, 1964).

Almost all of these activities have disappeared from the curriculum of present-day Montessori preschools, leaving them as pale shadows of her rich vision. Further, as Montessori's son, Mario, Jr., states, "The school must be a cultural environment, so that children have the opportunity to become familiar with the basic aspects of their own culture" (Mario M. Montessori, 1976, p. 42). This dictum did not appear to be followed in any Montessori preschool visited by the authors of this discussion, nor was there evidence of teaching towards cultural pluralism.

Teacher behavior. It is the teacher's behavior that most sharply differentiates the Montessori and the regular preschool. The Montessori teacher is enjoined to prepare the didactic environment (the teaching materials and the aesthetic appearance) before the child enters and then to step back and leave the child to interact with it. The teacher intervenes only (a) on academic grounds, if a child seeks assistance, or

if it is deemed that a child or group needs an introductory or continuation lesson in any area of the curriculum (whether the child or group has solicited the lesson or not); or (b) if a child is interfering with another child, misusing materials (using material in a way different from that demonstrated by the teacher), or being destructive towards material (Montessori, 1914, 1964; Orem, 1974; Sambusch, 1962, n.d.; Elkind, 1983; Beyer, 1966). The Montessori teacher does not, therefore, engage in such regular preschool teacher behaviors as making friendly overtures to any child within the classroom, engaging in conversation that is not directly related to the work at hand, commenting on the child's work by way of praise or encouragement, assisting the child to find a suitable occupation, positioning himself or herself in the classroom near an activity in order to stimulate the child s interest in it, joining in any ongoing activity in order to assist the child to achieve objectives more fully (such as illustrating a new way to join materials together during construction with waste materials), entering the child's conversation or initiating one in order to introduce appropriate vocabulary or concepts, modelling techniques (such as new ways to do finger painting), assisting the child to enter an ongoing social situation, or intiating an activity that adds an extra dimension to an ongoing activity (such as a chant or song to accompany children's actions).

This range of teacher activities may occur during any work session in a regular preschool. The teacher acts, in short, to enrich the educational climate and environment. It is hard to believe that Montessori would have forbidden these activities out of hand since most of them maintain the child as the controller of his or her own learning.

Indeed, she spoke often of the teacher's need to observe the child closely before making any intervention.

Montessori's injunction to the teacher to stand back was generated in response to the then-current behavior in which the teacher did the talking and the children listened. Montessori demonstrated that there were other ways of teaching than being the focal point in the classroom, and regular preschool teachers have accepted this "diffused" teaching style as one possible strategy. In the authors' view, modern Montessori teachers have accepted Montessori's ideas but have codified them to the point of limiting themselves to interacting with children within a narrow range of possibilities: "[In regular preschools] a strong teacher-pupil relationship is frequently viewed as the key to the child's successful learning. For Montessori, however, the critical relationship is between the child and his learning materials" (Evans, 1975, p. 266).

One aspect of the Montessori teacher's role is to act as guardian of the environment. The teacher should, therefore, keep an eye on all children so that they do not walk away from an activity before tidying up their work area and returning the activity to its rightful place. A regular preschool teacher encourages rather than requires this sort of behavior when an individual activity is selected, but many activities in the regular preschool are for use by groups, and the clearing up is undertaken by the group or by other children at the end of a work period. The regular preschool teacher sees this activity as a useful lesson in cooperation.

Montessori teachers may tend to take their responsibility for the environment to excessive lengths when they walk about the room straightening mats, trays, and materials that children are currently

working on. The modelling of this behavior causes children to tend to act in the same way.[3]

For the Montessori teacher, the role of demonstrator is an important one. The teacher is to demonstrate to the child, either at the child's request or on the teacher's initiative, the way in which the classroom material is to be used. Caldwell, Yussen and Peterson (1981), in a study of 17 Montessori teachers and 20 traditional teachers, showed that Montessori teachers were "more structured in their beliefs about the manner in which they should guide the child's use of instructional materials" (p. 43). This finding is not surprising. During training, the teacher will have compiled "albums" or notebooks, usually handwritten, often illustrated, on the exact method to be used in introducing each piece of material to the child. The quality of the teacher's presentation to the child is one criterion by which the Montessori teacher is judged. The presentation includes modelling the correct way to lay out the materials before they are used and illustrating the ideal sequence of actions to be taken in using the material. When the teacher withdraws, the child theoretically is free to operate upon the materials in any way he or she chooses. However, the child's behavior may pose a dilemma to the Montessori teacher as to whether intervention is desirable if the actions are too dissimilar from the ideal or if the behavior moves into fantasy play. If, for example, a block from the pink tower set is used as a racing car to race in and out of the other blocks, the teacher would tend to intervene, saying, "You are not using these things properly. Please put them away on the shelf."

Such an episode brings into focus basic differences in the behavior of the Montessori and the regular preschool teacher. The Montessori

teacher is the custodian of the materials and a regulator of the behavior that may occur when the child uses them. In this respect, the role is an inhibitory one. In the same situation, a regular preschool teacher would have perhaps made no intervention or might have joined the child to encourage the addition of language to the action, modelling as necessary ("Your car is going fast; you are avoiding collisions"). The teacher might even have suggested that a bigger and better raceway could be constructed in the block corner, reflecting that this child was able to use an object (a pink block) symbolically and could be helped in the future with symbolic thinking. Thus, the regular preschool teacher's behavior tends both to be stimulatory and to include a wider range of possible responses than that of the Montessorian.

Discipline. On the question of discipline of the child, modern Montessorians have codified and limited a suggestion made by Montessori about the usefulness of isolating the wrongdoer and have ended up with a system of discipline that may appear to be harsh when compared with regular preschool practices. In the light of modern psychological insights, it may also be alienating to the child.

Montessori (1914) wrote with respect to the disciplining of a child who disturbed others that "we placed one of the little tables in a corner of the room, and in this way isolated the child, having him sit in a comfortable little armchair, so placed that he might see his companions at work, and giving him those games and toys to which he was most attracted. This isolation almost always succeeded in calming the child . . . The isolated child was always made the object of special care, almost as if he were ill" (p. 103).

Note that this solicitous treatment was meted out to children who disturbed others. Nowadays, the method may be applied to a wide

variety of transgressions and consists of isolation without solace. The isolated child is required to be ignored by all, a practice that very often causes distress to classmates when, as one of the present authors has observed, the isolated one sits sobbing. Note also Montessori's mention of "toys." There are no "toys" in the Montessori classroom of today for anybody's consolation; all materials have a specific purpose, and playful manipulation or exploration, which characterizes a child's use of a toy, is not permitted.

The regular preschool teacher's approach to discipline may include a variety of strategies (see Almy, 1975). These may include verbal intervention (perhaps explaining, conciliating, helping children to negotiate frictions); direct verbal prohibition, if need be; or physical restraint of a child in an emergency. The teacher would be expected to think quickly before acting and to choose the most useful intervention to fit the situation. In cases of misbehavior in a group teaching situation, the offender might be asked to leave the group until such time as he or she were able to participate without disturbing others. Ideally, the child decides when to rejoin the group, thus taking responsibility for his or her own behavior.

One of the present authors has observed that, by contrast, the Montessori teacher seems to stand aloof as a situation develops and then moves to the offender to direct him or her to the isolation chair. Sometimes a caution is issued first. Thus, children miss valuable social learning experiences. Montessori children tend to experience an impersonal authority, though in many cases a private discussion of the misbehavior may follow at the end of the isolation period.

RESEARCH COMPARISONS

Research comparing Montessori preschool education with regular preschool and kindergarten education for middle class and economically disadvantaged children was surveyed by Miezitis (1971) and McGrath (1980). Miezitis reviewed 10 different studies, five of which involved middle class children and five of which involved disadvantaged children. The number of children across the 10 studies was approximately 350. In the five studies using middle class children, Miezitis found that the majority of comparisions revealed no significant differences between Montessori and other preschool and kindergarten programs on measures of ability assessed on the Illinois Test of Psycholinguistic Abilities (ITPA) and Piagetian conservation tasks. Preschool children in a structured cognitive program (Bereiter-Engelmann) were superior to Montessori children on measures of arithmetic, reading, and spelling.

On sociomotivational and cognitive style measures, there were few significant differences between Montessori and non-Montessori groups. However, Montessori groups showed significantly higher scores on measures of task persistence, reflective cognitive tempo, and self-reliance. The regular preschool group was superior on measures of nonverbal creativity and in the depiction of people (rather than geometric figures) in a free-drawing task. Miezitis suggests that for these middle class groups the similarities in home environment may be more influential than any differences in schooling.

In the five studies with disadvantaged children, Miezitis found that on cognitive ability and achievement measures Montessori preschool groups showed (a) greater gains than control groups without preschool

education, (b) nonsignificant gains in comparison with regular preschool groups, and (c) lower gains in comparison with structured cognitive-oriented preschool programs of the Bereiter-Engelmann type.

In sociomotivational and learner style measures obtained in four studies, Miezitis found significantly higher scores for Montessori groups on measures of attentiveness, intentional learning ability, efficiency in structured problem solving, motor impulse control, field independence, task persistence, and test confidence. However, in a fifth study these differences were nonsignificant or favored non-Montessori groups.

In summary, Miezitis found that results from the ten studies did not show strong differences in favor of Montessori groups. The clearest differences were found with disadvantaged groups of children in the cognitive area and appeared to reflect classroom structure, a high degree of structure apparently promoting cognitive gain. However, when Montessori groups were compared with groups that were even more highly structured, children in these latter groups outperformed Montessori children.

In McGrath's (1980) review of research, involving 11 separate studies, Montessori children were shown to spend more of their free time in social interaction, to have a lower rate of child-adult interaction than other children, and to show cognitive gains in direct proportion to number of years of Montessori education. Children were significantly advanced in the acquisition of seriation and classification skills but not in conversation skills (White, Yussen & Docherty, 1976); in addition, they experienced more variety of activity per day than did children in other preschool programs (Berk, 1976). On the question of creativity, findings were equivocal. McGrath cited three studies that she inter-

preted as showing that Montessori education fosters creativity. However, the cited studies do not appear to support this conclusion.

One of the studies (Dreyer & Rigler, 1969) measured creativity by Torrance's picture construction test and found that Montessori children had generally lower scores than their nursery school counterparts. The second study (Brophy & Choquette, 1973) tested 31 matched pairs of Montessori and traditional preschool children on a different measure of creativity: The Torrance Unusual Uses Test. Only one of the pairs showed a significant performance difference in favor of the Montessori cnild. The overwhelming majority of pairs showed no statistically significant difference. The third study that McGrath cites is that by Miller and Dyer (1975), which demonstrated that disadvantaged children who had received a preschool Montessori education were superior in divergent thinking to children who had received three different types of preschool education.

If divergent thinking is synonomous with creativity, then this last study could be interpreted as suggesting that Montessori education may develop creativity. Yet the other two studies seem to bear little evidence to support McGrath's conclusion that this is the case. At best, it may be possible to say that Montessori education does not inhibit creativity.

On social cognitive tasks and memory problems, Yussen, Mathews, and Knight (1980) found that the Montessori curriculum "exerts some influence on cognitive skills beyond the narrow bounds of the ones ostensibly taught in the classroom" (p. 136). However, the impact was not uniform or easily predictable.

Chattin-McNichols (1981), reviewing, among other research, a longitudinal study by Miller and Dyer (1975) noted that Montessori subjects had declined less in IQ scores than had the other three experimental groups and had the highest IQ scores at the end of the experiment. However, the mean IQ of the control group had increased, and results are therefore difficult to interpret.

In summary, these types of studies are relatively inconclusive in many cases, contradictory in others. For example, Sciarra and Dorsey, cited by McGrath (1980) showed cognitive gains in direct proportion to the number of years spent in a Montessori program, whereas White, Yussen, and Docherty (1976) found that children tested after 6 months of Montessori education tended to perform as well on certain cognitive tasks as children tested after 18 months. Other problems in research methodology are apparent. In a study by Reuter and Yunick (1973), a lower rate of adult-child interaction was reported for Montessori subjects; however, the child-adult ratio was 12:1 in Montessori schools as compared with 3.5:1 in comparison schools.

Few of the experimenters appear to have taken account of the amount of time spent by Montessori subjects on specific Montessori activities, and thus research has generally failed to examine the extent to which Montessori schools are an experimentally homogeneous group. It appears likely that there are great differences in the implementation of Montessori method within Montessori schools.

Miezitis (1971) has cited a study by Starr and Banta in which Montessori pupils were measured on the amount of time they were engaged in using didactic materials. A wide variation was observed. The researchers reported that individual children spent from 1% to 21%

of the available school day with didactic materials (an average of 12%). Two classrooms were observed: a highly structured one, where 10% to 21% of the time was spent with didactic materials, and a relatively unstructured one, where 1% to 7% of the time was spent with didactic materials. In the structured class, 90% of the didactic activity was self-initiated by the pupil and unaided by the teacher, whereas in the unstructured class this was so for only 56% of the didactic activity time. Clearly, in studying the effect of the Montessori school on groups of children, it is necessary to measure the amount of time working with didactic materials as well as the amount of time engaged in practical life activities and in teacher-initiated and teacher-controlled group work. Starr and Banta's work does suggest that the Montessori method may be experienced more vividly by some children than by others. A wide amount of variation was also noted by the present authors when visiting Montessori schools.

Another unexamined variable is the training and experience of the teacher. This may be a most important variable since some teachers have taken only a few weeks of summer training followed by an internship. There appears to be little useful data on this matter. In a study by Caldwell, Yussen, and Peterson (1981), 17 Montessori teachers in Wisconsin were found to have a mean educational level of 5.1 years beyond high school, as compared with 4.8 years for "traditional" teachers. No information was provided as to the relevance of the education. In the Miller and Dyer (1975) longitudinal study, the Montessori teachers were apparently graduates straight from college. They had no teaching certification and received 8 weeks of Montessori training. Teachers in the non-Montessori comparison groups received 4

or 8 weeks of training in the method they were to teach, but apparently all had previous teaching experience.

Miller and Dyer's (1975) study of the effects of four preschool programs, including Montessori, is a model of good early intervention research, involving as it does random assignment of subjects to treatments, observation of the intervention process, simultaneous replication of treatments, longitudinal data, data on a variety of measures, and a control group. The general finding of this study was that preschool children in all treatments made early gains and that control children caught up by the end of second grade. Unfortunately, there were only two schools representing the Montessori method, as compared with four schools representing each of the other three methods. McGrath (1980), reviewing Miller and Dyer (1975), stated that, at the end of second grade, children who had had a Montessori preschool education were superior to the three other groups on certain measures. The present authors are not able to agree completely with McGrath's interpretation. What Miller and Dyer said is that Montessori males were the highest of all groups on five variables: IQ, curiosity, teachers' ratings of ambition, and both reading and mathematics achievement. However, they concluded that "the magnitude of these score differences would not justify an uncritical acceptance of Montessori [preschool education]" (p. 132).

Sheldon White, in a comment included in the Miller and Dyer (1975) study, concluded that, "there is no finding of lasting difference attributable to different kinds of [preschool] kindergarten programs--just possibly some interaction effects on the 'non-cognitive' measures that are complex, small in magnitude, and difficult to interpret" (p.

169). This was not to say that there were no lasting effects from the preschool education programs; White pointed out that the preschool child, in addition to developing cognitively, is also constructing his or her own theories about self and others, society, and politics. It remains to be seen whether we can or wish to attempt to measure the effects of preschool on these other aspects of the development of the young child.

Jones and Miller (1979) followed up Miller and Dyer's (1975) study when the original subjects were in the sixth and seventh grades. A total of 140 of the initial 200 subjects were located and tested for IQ and school achievement. There was a slight trend towards superior achievement performance by Montessori subjects; however, most of the differences were not statistically significant. In general, it would seem important to remember that home environment is an influential factor in any child's achievement. It has been observed that Montessori education suits the aspirations of many parents, particularly those concerned with academic achievement and self-discipline. Phillips (1980) has also noted that the popularity of Montessori schools has risen in conjunction with more authoritarian modes of parenting.

In response to the contradictions in the research evidence, Chattin-McNichols (1981) has concluded that

> it seems important to begin to assess the effectiveness of the Montessori system in terms of goals of Montessorians, rather than measures of general academic progress or cognitive development. Goals which would probably be accepted as important by most Montessorians include autonomy, each child's sense of success in academic areas, self-concept, an

understanding of mathematical and geometric concepts, and the development of a world-wide perspective on cultural subjects such as history, geography, and social studies. The focus so far has been too limited to comparative studies; more and better research is needed to examine variability within Montessori schools. (p. 65)

TEACHER EDUCATION

Rambusch (1978) has made a withering criticism of Montessori teacher education. It is, she says "based on an act of the heart, conversion, rather than an act of the mind, persuasion" (p. 5). She claims that the training she received in 1954 has not changed today, and the present authors can verify this from visits to training institutions. Training consists of lectures on Montessori principles[4] and anecdotes from Montessori's life, the taking of dictation on the use of the Montessori materials, the manipulation of these materials in order to practice the sequence of presenting the materials to the child, observation in Montessori schools, and teaching practice in Montessori schools.

The heart of the matter is this: Montessori teachers are inadequately trained by today's standard of teacher education. To begin with, they are not necessarily educated beyond high school level, and they need not have a teaching credential from a state authority. In the United States, the Montessori teacher may enter training straight from high school, following work experience with young children, or following an associate's degree at a junior or community college. In fact, many Montessori trainees do hold a 4-year degree when they begin Montessori training, but it is important to realize that they need not.

There are two principal types of training for Montessori teachers in the United States, and these are related to the organization with which the training program is affiliated. Affiliates of the Association Montessori Internationale (AMI) are approved by AMI at its Amsterdam headquarters. There are five training sites in Europe (Italy, France, Germany, the United Kingdom, Ireland), four in Asia (India, Pakistan, Sri Lanka, Japan), one in Canada, one in Mexico, and 10 in the United States. Courses typically run from 9 to 11 months, of which 5 to 6 months are spent in coursework and 4 to 5 months in practicum.

The content of the coursework is based heavily on Montessori's own writing, especially The Absorbent Mind (1961), The Discovery of the Child (1958), and The Secret of Childhood (1959). These works, written between 1936 and 1949, embrace the essence of Montessori's ideals: a mixture of philosophical and psychological statement. In many respects, she was ahead of other psychological theorists of her time, but as Phillips (1977) has pointed out, she also lagged behind her contemporaries, particularly with respect to measurement and methodology. Phillips remarked that Montessori's scientific approach is openly intermingled with mysticism and sentimentalism. This leads to "generalizations based upon no empirical evidence whatsoever, and often flying in the face of it. There are also many metaphysical assumptions mixed with her scientific pedagogy" (p. 63).

It is now the case that modern psychology has furthered insights into cognitive development. By this process, some of Montessori's ideas have been refined and substantiated, while others are now disputed or considered irrelevant. Despite such advances, Montessori teachers in training are given little or no access to information about modern

developmental psychology. The syllabus of the recently established Australian Montessori Association (Association Montessori Internationale) course, for example, does not refer to any psychologist other than Montessori. The impact of theorists such as Piaget and the wealth of empirical evidence that supports and/or challenges his theory is ignored. Courses usually studied in a regular teacher education program--such as child development, educational psychology, sociology, curriculum development, special education, and multicultural education--are not taken by Montessori trainees. A course of study reported by Orem (1972) at the Montessori Institute of Atlanta, Georgia, is said to include some child psychology and child development, but very few semester hours are involved. Of the Midwest Montessori Teacher Training Center, he says, "Stress is placed on imparting the rationale underlying Montessori insights, materials and practices" (p. 121). It is quite clear that Montessori child development predominates heavily over modern child development, indicating that little modern child development theory is examined by teacher trainees. There is plenty of exhortation to observe but little skill training in modern techniques of how to observe or in what to use the observations for (Orem, 1974, p. 214). This is not considered by the present authors to be an adequate basis for a teacher education program.

Teacher training establishments affiliated with the American Montessori Society (AMS) appear to be more varied in their programs. In a few cases, training programs are offered through community colleges. Students typically enter these colleges straight from high school or as reentry students. However, the majority of training sites are established in conjunction with Montessori schools. A typical

school-based training program consists of a summer session of 4 weeks followed by a year-long internship in which the intern works as a teacher's aide and attends occasional weekend seminars. The present authors' general impression of Montessori teacher education is that it is largely an oral tradition, that methods have not changed over the last few decades, and that modern insights into child development are ignored.

Evans (1975) notes that "Montessori teachers and administrators seem more concerned with perfecting their pedagogical technique, than with supporting a continuous enquiry into the validity of the methodological procedures involved" (p. 279). In addition to programs affiliated with AMI and AMS, many schools train their own teachers. Very little has been written about Montessori teacher education. One source is Orem (1972, 1974), whose works represent nearly all that has been written on the subject. The summaries of training programs Orem presents are, by and large, lists of materials together with methods for introducing them. Theoretical bases for the presentation and manipulation of such materials are largely ignored.

THE PLACE OF THE MONTESSORI METHOD IN EARLY CHILDHOOD EDUCATION TODAY

In view of the limitations and inadequacies of the Montessori method of education and teacher education, what is to be made of the Montessori debate? The present authors conclude that Montessori education, as practiced today, is misguided in its attempt to keep alive a system of education that may have been effective and appropriate in

the past, but which, being fossilized, is inappropriate for the children of today.

Both educators and parents should be suspicious of a system that (a) ignores recent educational thinking, especially in regard to using a modern understanding of child development to inform educational practice; (b) trains its teachers in isolation from all other teachers; (c) accepts a low standard of teacher preparation (as measured by level of intake, length of training, rigor of training, credentials of the trainers, and acceptability of credential); (d) conceptualizes teacher education as an exercise in learning how to present the Montessori materials to children; (e) defines education narrowly, paying scant attention to gross motor development, social skills, language and literature, creativity, and the arts; (f) uses a harsh, outmoded system of discipline; and (g) limits parental involvement.

The Persistence of Montessori Schools

It might be fairly asked, in the face of all these problems and inadequacies, Why do Montessori schools persist? Several factors account for the continuation of Montessori education.

1. Montessori education has strong overtones of a religion. The adherents of the Montessori method have an almost mystical belief it its efficacy and preach eloquently on its behalf. Neither adherents nor converts are involved in questioning the method's basic assumptions and beliefs. A university mathematician developing a new piece of mathematical apparatus for use with children, whom one of the present authors met at a Montessori preschool said, "I know this system works . . . it's best for children." Yet upon

questioning, he revealed that he knew no other system of early childhood education and had not as yet trialed his mathematical apparatus with the children in that school.

2. The parents who select a Montessori school for their child usually have no previous experience in selecting a school and no standards of comparison. Parents, who are generally invited to pay a 30-minute observation visit to a classroom before enrolling their child, tend to be impressed by the orderliness of the environment and the eloquence of the director. One of the present authors spoke to two prospective parents after one such observation visit. The husband, a psychiatrist, was impressed; the wife, a primary school teacher, was not.

3. Some parents are eager to give their children a good start in life, via education, and see the work ethic of present-day Montessori schools as matching their beliefs in the value of hard work and strong discipline. A parent said to one of the present authors of her 3-year-old son, "Well, they've got to learn to work hard in this world, and I'm pleased to find a school where they're made to work."

4. Some Montessori schools have kept their name but branched out from the narrow curriculum of the orthodox Montessori school. These schools offer sand and water play, gross motor activities, storytelling, parental involvement in the classroom, and games and activities purchased from sources other than the Montessori educational suppliers. A teacher in one such school said, "A morning in the sandbox can be [the

children's] work." This is not a typical Montessori concept and raises the question of whether some parents are misled about what is unique to Montessori education. That some schools continue to use the name "Montessori" may mean no more than that they continue to display Montessori materials alongside other educational materials. In this case, children are free to select or to ignore these materials and may use them no more than a tiny fraction of the time, as indicated in Starr and Banta's study (cited in Miezitis, 1971).

5. Academics who take an interest in Montessori education are usually not trained and experienced early childhood educators, and they approach Montessori education from a theoretical point of view and in ignorance of alternatives.
6. Present-day early childhood educators, by and large, have ignored Montessori education. When they have looked into it they have noted that (a) many of the practices that are claimed to give special distinction to Montessori schools are fully incorporated into regular preschool programs; (b) Montessori teachers are poorly prepared as teachers and have a limited understanding of child development; (c) the Montessori classroom environment is frequently impoverished, rigid, and rule-bound; (d) music, dance, drama, literature, and poetry are neglected; (e) the role of the teacher in fostering language development and stimulating children's interests is not encouraged; (f) dramatic play, considered a tool for learning, is discouraged; and (g) discipline may be harsh and unsympathetic. Such educators have failed to

point out these problems, an understandable lapse since they believe that early childhood education has assimilated all that is best in the thinking of Montessori. However, they fail to inform the public of these facts. Conversely, some Montessori schools resemble regular preschools, having added to their curriculum a wide range of modern educational activities and subjects; these schools also fail to inform the public of this deviation from the original Montessori design.

A Proposal for Montessori Teacher Education

When one returns to the writings of Maria Montessori, one is struck afresh with her intelligence, vision, wisdom, insight, and modernity. She was without any doubt a person ahead of her time, a remarkable innovator. She demonstrated that young children could learn academic and social skills and that young disadvantaged children could do so equally well as those more advantaged. Her system of education flourished during her lifetime, lapsed, and is now experiencing a mild revival. Phillips (1977, 1980) has charted the rise, fall, and rise again of the acceptability of Montessori's viewpoint to psychologists, philosophers, and parents. Miezitis (1971) and McCrath (1980) have summarized empirical studies searching for relationships between Montessori education in the early years and achievement reflected in such variables as cognitive ability, academic skills, and personal learning styles. Such few comparisons as do favor Montessori education do not constitute a compelling reason to favor Montessor education for all children.

The level at which a study of the Montessori approach might be useful is at the postgraduate level, for students who already have early childhood teaching qualifications and who, in addition, have had some experience in teaching young children. In this case, a study of the contribution of Maria Montessori and her followers, together with some practical experience in using Montessori materials with young children, would give experienced teachers the opportunity to judge for themselves the efficacy of the special Montessori apparatus and to evaluate the particular teaching approach that she advocated. Students would then, as classroom teachers, be in a position to use selectively the Montessori materials and the Montessori teaching style if they so desired. Thus, skillful and experienced teachers could expand their repertoire of teaching techniques, which they would employ according to their professional judgment.

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FOOTNOTES

[1] For expansion on this subject, see Montessori (1914) and Phillips (1977), a discussion of Montessori's ideas, philosophical and pedagogical, from a historical perspective.

[2] See, for example, Almy (1975), The Early Childhood Educator at Work, pp. 22-26. Almy points out that the thrust of the regular early childhood educator's strategy is to respond flexibly--in terms of materials used and strategies employed--to children's interests.

[3] For an example of obsessive tidiness in a child, see Simons (1980), p. 12.

[4] Fleege (1977) provides a sample list of such Montessori principles.